

New species of the genera *Elachisina* and *Rissoella* (Mollusca, Gastropoda) from the Cape Verde Archipelago

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ABSTRACT. *Elachisina canaliculata* and *Rissoella luteonigra* are described from the Cape Verde Archipelago. The new species are compared with other similar congeneric species from the Atlantic area.

INTRODUCTION

Continuing with the description of the malacological material recently found in the Cape Verde archipelago, we are presenting two new species: one in the family Elachisinidae Ponder, 1985, genus *Elachisina* Dall, 1918, and the other in the family Rissoellidae Gray, 1850, genus *Rissoella* Gray, 1847. The new family Elachisinidae was described and discussed by Ponder (1985). We have in preparation a revision of this family from West Africa that includes several unnamed species, of which the present species is the second one to be described in this genus from this area. Previously, only *E. eritima* had been described from St. Helena (Smith, 1890, as *Rissoa eritima*).

With regard to the second family, Rissoellidae, a revision of the Mediterranean species was made by Fasulo (1989) and the east Atlantic species were figured in Fretter & Graham (1978), in Rolán (1983) and in Rolán & Otero-Schmitt (1996). The west Atlantic species were discussed by Robertson (1961a, 1961b) and a new species was described by Simone (1995).

Abbreviations

AMNH: American Museum of Natural History, New York.

DBUA: Departamento de Biología, Universidad Autónoma, Madrid

MNH: Muséum National d'Histoire Naturelle, Paris

MNCN: Museo Nacional de Ciencias Naturales, Madrid

CER: collection E. Rolán

CFR: collection F. Rubio

CPR: collection P. Ryall

sp: specimen with soft parts

s: empty shell

j: juvenile

SYSTEMATICS

Superfamily **RISSEOIDEA** Gray, 1847
Family **ELACHISINIDAE** Ponder, 1985
Genus *Elachisina* Dall, 1918

Elachisina canaliculata n.sp.
Figs. 1-5

Type material

Holotype (s) (Fig. 1) in MNCN (15.05/44327).
Paratypes (s) in the following collections: MNHN (1), from Parda, Sal, 3 m; DBUA (1), from Ilheu Branco, 50 m; CER (1), from Baia Teodora, Boa Vista, 6 m; CFR (1), from Ilhéus de Rombo, 6 m.

Other material studied

Sal: 1 s, Mordeira, 5 m (destroyed during the study);
Santiago: 1 s, Praia, 8 m (in bad condition).

Type locality

Parda, Sal island, Cape Verde archipelago, in sediment.

Etymology

The specific name alludes to the sculpture of the shell, from the latin "canaliculatus", with small grooves.

Description

Shell (Figs. 1-3) of small size, thin, somewhat transparent, whitish, ovoid, with 2 – 3 whorls separated by a well defined suture. Protoconch (Figs. 3-4) globose, smooth, with a little more than 1 whorl, and a maximum diameter of 258 µm. Holotype with 3 slightly convex postlarval whorls. Dominant

sculpture on the teleoconch consists of spiral grooves (Fig. 5). These are almost canal-like, and cover the entire shell surface (numbering between 22-25 on the last whorl, with the final 3-4 grooves reaching into the umbilical funnel); irregular prosocline growth lines are visible. Aperture oval, with a small angulation in the upper part, and with the lower border slightly deflected. Outer lip sharp, forming a small prominence where it meets the deflected base of the aperture. The central area of the columella is curved and reflected towards the umbilicus, which is narrow, curved and elongate. Umbilical funnel with several fine threads and also a vertical cord. A ridge separates the umbilical funnel from the surface of the final whorl, finishing on the base at the juncture of the inner and outer lips.

Dimensions: The holotype is 1.9 mm in height.

Animal, radula and operculum are unknown.

Distribution

Known from the islands of Sal, Boa Vista, Santiago, Ilheu Branco and Ilheus de Rombo. Therefore the species probably occurs throughout the archipelago, and is presumably endemic.

Remarks

The characteristically wide grooves differentiate the present species from others in the genus *Elachisina*. The umbilicus is deep, narrow and curved, unlike the wider umbilicus of *E. bakeri* (Strong, 1938), from California. *E. grippi* Dall, 1918, from California, and *E. floridana* (Rehder, 1943), from the Caribbean, are larger, with more whorls and many spiral grooves. *E. eritima* from St. Helena is smaller, more rounded in profile and with finer spiral striae.

Superfamily **RISSELOIDEA** Gray, 1850

Family **RISSELLIDAE** Gray, 1850

Genus *Rissoella* Gray, 1847

Rissoella luteonigra n. sp.

Figs. 6-10

Type material

Holotype (sp) (Fig. 6) and 12 paratypes (sp live collected in alcohol) in MNCN (15.05/44373). Paratypes (s) in the following: MNHN (1), AMNH (1), DBUA (1), CER (5), CFR (5), CPR (2), all from type locality.

Other material studied

Sal: 10 sp, about 500 s, 30 j, Regona, 1-10 m; 35 s, 10 j, Palmeira, 2-10 m; 55 s, 10 j, Palmeira, 20-50 m; 6 sp, 18 s, Santa Maria, 2-4 m; 4 s, Pedra de Lume, 4 m; 3 sp, 7 s, 10 j, Rabo de Junco, 4 m. Boa Vista: 96 s, Sal Rei, 2-10 m; +200 s, 40 j, Porto da Cruz, 4 m;

46 s, Derrubado, 2 m; 23 s, Porto Ferreiro, 4 m. Maio: 30 s, Pau Seco, 30 m; 10 s, 7 j. Navio Quebrado, 1-5 m. São Vicente: 120 s, 30 j, Porto Mindelo, 15 m; 10 s, Salamaça, 1 m. Santiago: 15 s, Prainha, Praia, 8 m; 35 s, 10 j, Tarrafal, 4-10 m; 10 s, Tarrafal, 30 m; 4 s, Pedra Badejo, 4 m; 12 s, Cidade Velha, 4 m. Fogo: 6 s, San Felipe, 30 m. Brava: 35 s, 10 j, Pedrinha, 8 m; 88 s, 12 j, Furna, 20-30 m; 39 s, Porto do Ancião, 10 m. Ilheus de Rombo: 1 sp, 3 j, Rombo Grande, 4 m. Santo Antão: 4 s, Portonovo, 8 m. Santa Luzia: 6 s, Praia Francisca, 2 m. Ilheu Branco: 6 s, 5 j, 50 m.

Type locality

Ilheus de Rombo, Cape Verde archipelago.

Etymology

The specific name alludes to the coloration of the soft parts visible through the transparent shell.

Description

Shell (Figs. 6-7) small, spherical or ovoid-conic, fragile, transparent, whitish, smooth and shiny. Protoconch (Fig. 10) with little more than ½ whorl subsequent to the nucleus. Teleoconch between 2-3 convex whorls, suture well defined. No sculpture, but a few slightly prosocline growth lines. Aperture ovoid, outer lip sharp, peristome continuous, with the inner lip forming the boundary of a small umbilicus that is usually reduced to a furrow.

Dimensions: Larger specimens reach to 1.8 mm; the holotype is 0.8 mm.

Animal (Figs. 8-9) totally black, snout bifid, the two rounded lobes and adjacent tentacles appearing almost equal in length, the eyes small and close together, visible through the transparent shell. The body is predominantly black, but the hypobranchial gland is visible dorsally as a rounded, slightly ovoid loop of shining yellow, from which an extension runs further to the rear.

Operculum ovoid, with the nucleus near the columellar border.

When the animal is very young the black colour is not yet established, and the soft parts appear brown with a white hypobranchial gland. On some specimens the gland has been observed to be a silver color instead of the usual yellow.

Habitat

This species lives on rocks with algae, from intertidal to 30 m.

Distribution

Known from the entire archipelago, to which it is probably endemic.

Discussion

The distinctive colour of the animal differentiates *R. luteonigra* from the European species with closer shell characters. The animal of *R. diaphana* (Alder, 1848), which appears violet or dark brown through the early whorls of the shell, is yellowish with a green band on the head; *R. opalina* (Jeffreys, 1848) has a more globose shell, and the animal is totally greyish; *R. globularis* (Jeffreys in Forbes & Hanley, 1853) and *R. inflata* Locard, 1892, have shorter, very globose shells.

Of the west Atlantic species, the shell is similar to that of *Rissoella galba* Robertson, 1961, but the animal of that species is yellowish, with a brown digestive gland. The animal of *R. caribaea* Rehder, 1943 is totally black or has a cream colour pattern on the mantle, as noted by Robertson (1961a). *Rissoella ornata* Simone, 1995, recently described, also has a similar shell but the animal colour is very different, yellowish white with brown pigment on the lateral region of the foot and around the eyes.

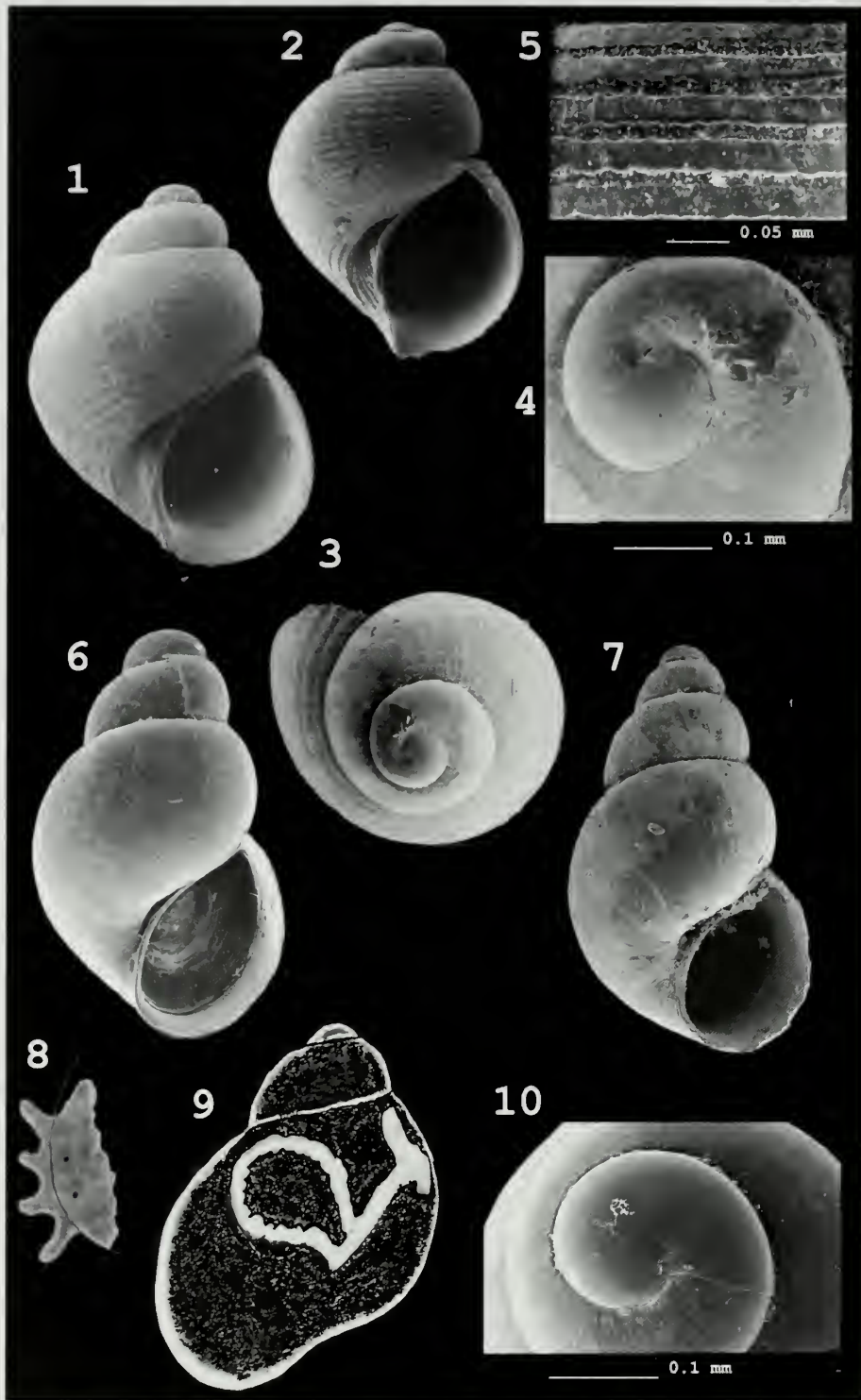
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1-5. *Elachisina canaliculata*.

1. Holotype, 1.9 mm (MNCN); 2-3. Paratype, 1.3 mm (MNHN); 4. Protoconch of the paratype; 5. Microsculpture of the last whorl.

6-10. *Rissoella luteonigra*.

6. Holotype, 0.8 mm (MNCN); 7. Paratype, 1.2 mm (MNHN); 8. Soft parts of the head, visible at the border of the aperture of the shell; 9. Colour of the soft parts, visible through the transparent shell; 10. Protoconch.